Rec. Mar 26
ans. same day

BOTANIC GARDEN,
HARVARD UNIVERSITY,
Cambridge, Mass. March 23d 1878

My dear Dr Engelmann,

The box of cuttings for you referred to in the enclosed card I have sent off to day without opening. as those intended for me were in a good, fresh condition. I enclose some seedlings raised from your seed of Celtis integrifolia. Either the person who collected the seed made a mistake or ~~this~~ it is a variety of the ordinary latter which has not even reproduced itself from seed. But I suspect the first supposition is correct, as in two large pots of seedlings I don't detect a single one with entire leaves.

We have had a most favorable winter for all sorts of plants and the earliest spring I remember.

Always faithfully yours,

C. S. Sargent.

Do you know anything about the vernal buds of *Carya microcarpa*? They ought to be looked at.

Rec April 15
Ans — 16

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. April 12 1878

My dear Dr Engelmann,

What does your herbarium or your observation show to be the western limit of Prunus serotina? Here we have no specimens from west of the Mississippi, or do I find it mentioned in any of the lists or Catalogues of the plants of the trans-Mississippi States. But some of my western correspondents pitch into me for saying that it does not cross the Mississippi. & they say that it is common in Nebraska & even in western Kansas along the banks of streams. I should expect it to

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in Iowa & Minnesota & possibly
in Missouri, but no further west.
If it does go into any of these States
we should have specimens here,
as the range of our plants, especially
of the trees, is an interesting and
important one. Before I received yours
of the 26 March, I had heard from
Le Conte & had done what I could
for him in the way of Thalictrum
which was not much in the way of
new species. I am watching your seedling
Celtis with much interest and if the
~~leaves~~ later leaves become entire, a good
deal of astonishment will be mixed
with the interest. Still I quite agree
with you that I don't know enough about
our trees. but ~~one~~ one can do more than
try to learn, which I do most assiduously.
I send a few seeds of Sciadopitys for you

Herb. as you may not have seen them. Faithfully, C S Sargent

Rec. April 24
ans same day

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. April 21 1878.

My dear Dr Engelmann,

Thanks for your information about P. serotina. I knew the Texas specimen labelled in your handwriting, but with that exception there is nothing in the herb. from west of Fountaindale, Ill. (Bebb). The Herb is wretchedly poor in trees. Did Dr Gray tell you, as I asked him to do, ~~that~~ that we have no ~~good~~ flowering specimens, or indeed leaves of any sort of Carya sulcata; and nothing but leaves of C. olivaeformis! I share with you the most interesting of the specimens referred to in the

Enclosed. What do you think of C. microcarpa? And please notice particularly No 2. The "stellate pubescence" is very deficient ~~to what~~ in amount from what every alba in this neighborhood has. and I have asked Commons to look at other trees and see if it is exceptional. I will let you know when his letter comes.

Look too at No 7. I have always taken this tree with its unusual exfoliating bark to be alba. but I don't see any difference between the buds of it & No 6 about which there is no question. Indeed I am rather ~~[illegible]~~ disappointed at not finding better characters in the buds of alba & tomentosa. The size seems the principal thing and the size of terminal buds so depends on the vigor of growth of the plant: as not to amount to so much. Size has doubtless the best of it.

Yours very truly
C. S. Sargent -

Acc May 13
Ans same day

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. May 9th 1878.

My dear Dr. Engelmann.

I am really very much obliged for the Elm seed. If it germinates you shall have the seedlings as you desire. The buds of C. alba from Cambridge were from the large tree on the terrace, the plant from which I sent you buds a year ago this spring, and probably the ~~same~~ tree from which you collected the specimens in 1856. as I have never known any other large in the Garden. The enclosed leaf shows that this tree ~~it~~ is alba (if I understand your character), although some of the trees of *alba* at Brookline are much more heavily "white fungus" than this. The character you give for the young leaves of alba & porcina holds good on as many of the plants of the two species as I have had time to examine. I note that porcina is about a week earlier than alba in leafing out. the two trees growing side by side & under exactly similar conditions. You say nothing of the pubescence on the old shoot (last years) of common alba. None of the plants in this neighborhood show anything like so much. Cant Mr Eggert get us plants of *Erigenia*, which is not in the Garden? I suppose it dies down early & must be got before the leaves disappear.

Faithfully C. S. Sargent

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By mail.
1 microsperma
2. Algoquiana.
3. Menziesii. glauca Colorado.
4. " green.
5. Sitchensis.

Rec June 13
Ans ~ 14

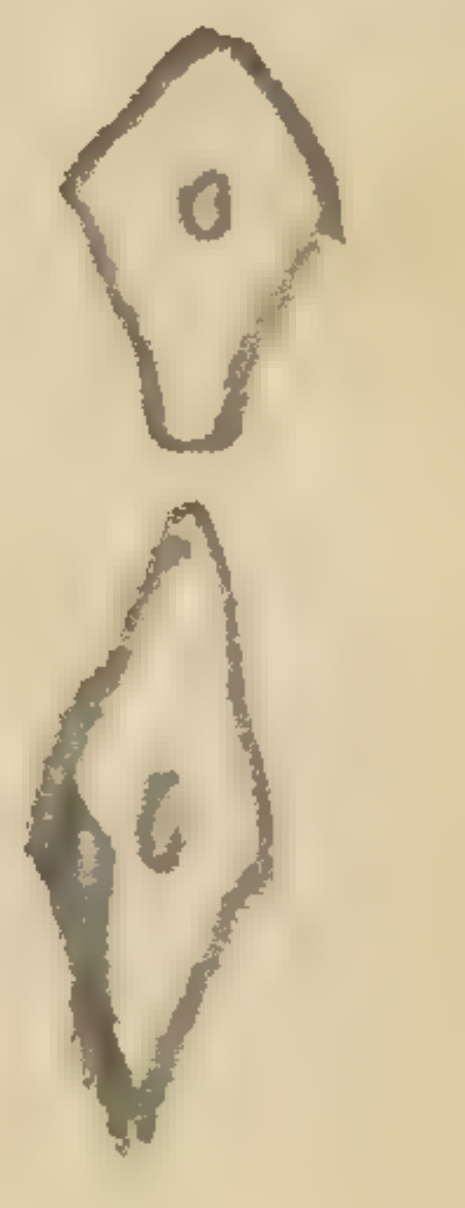
BOTANIC GARDEN,
HARVARD UNIVERSITY,
Cambridge, Mass. June 10 1878.

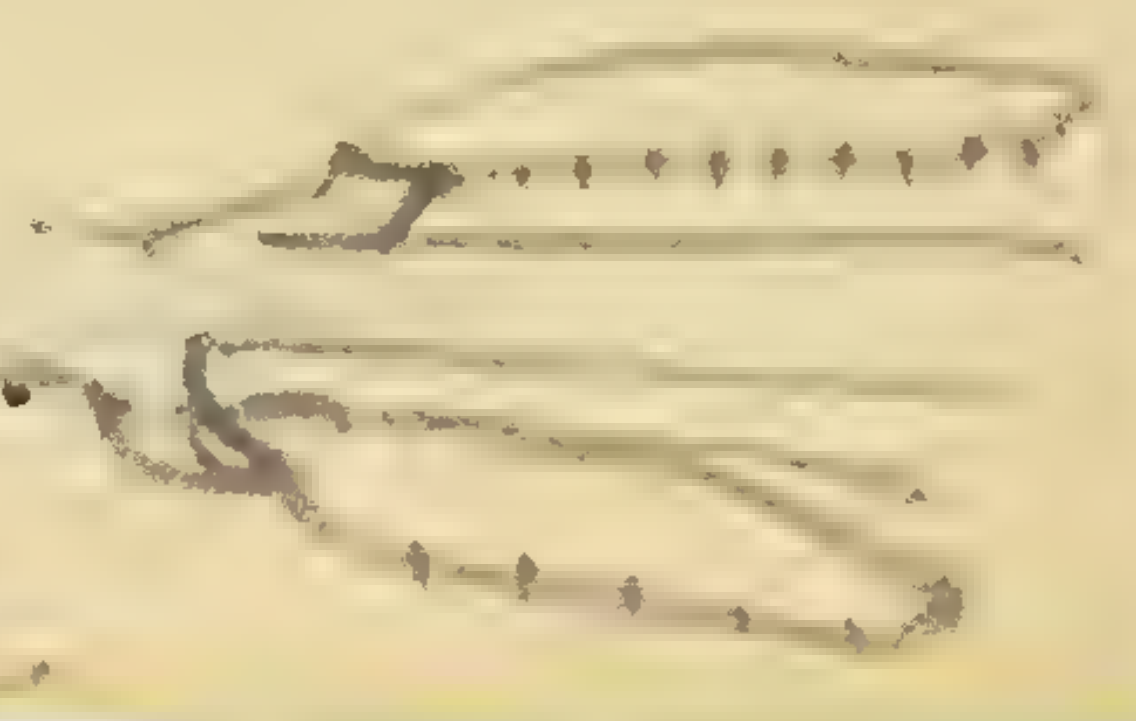
My dear Dr Engelmann,

I can't help you much about Abies microsperma. for I have never seen an old plant of it. or indeed any but my own. which as you know is very small. There is no specimen in herb. nor is there of A. algoquiana. nor, by the way, of your form fallax of A. subalpina. Heaven only knows whether my plant is rightly named. It came from some European nursery. which is rather good proof that it is not right. for when they send out a plant with its right name it is the exception which I have.

the rule that such persons are
habitually incorrect either through
ignorance or something worse.

last & years' leaves
As you know last 'years leaves ~~[illegible]~~
this plant were ◇. Now those
of this year begin to appear.
which you find in your St Petersburg
specimen: Is this because they
are younger. and will they thicken
up into ◇ as the season goes
on? This we must watch &
see. Notice that in this plant
the leaves have stomata above
& below. but not very numerous
on either side. In Alcoquiana
they are very numerous above
(of course) and none below.





why?

Judging by the leaves alone. this

hardly
can barely be referred to the same

species as my *microsperma*.

In *A. Menziesii* fr Colorado

the stomata are on both sides

again: but more abundant above

than below. The leaves fr Cascade Mts I enclose,

show stomata (I think) on both

sides but more above than below.

While those of an other specimen

in herb. fr Alaska have none

below. but very numerous are

above. On a plant I got some

years ago from Linden of Gent

under the name of *A. Sitchensis*

the stomata are very numerous

above. and few below. May this

be the true *A. Menziesii*. I have

but a single plant of A. Alcoquiana
about six feet high and never have
raised any seedlings — On my plant
I can find no square leaves, or any
different from those sent.
If Hooker, Meehan or Parsons have an
imported Menziesii, it must be
body
from the Pacific, as no body has the
from
Rocky Mt plants except fr me. I think
I know of a plant in New York State &
have written for a specimen. If I get
it will send it. No sign of any of the
Agaves flowering this year. Maculosa
we grow
We grow very well, but not so Virginica
which does nothing. I should like more
of them much in seeds. I have never flowered
it. Fedia Nuttallii from your seed
is in flower & a first rate garden annual.
I enclose a few seeds of A. Yezoensis?
sent me from Japan. Faithfully. C. S. Sargent

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Rec 21 Aug

BOTANIC GARDEN,
HARVARD UNIVERSITY,
Cambridge, Mass. August 16 1878.

My dear Dr Engelmann,

Perhaps this will find you at home again — I hope not. if it is as hot and disagreeable in St Louis to day as it is here. and then there is Yellow Fever. which may give a wide berth to — At any rate if you are not at home. this will wait well enough. I enclose leaves of my P. microsperma? that you may see that the compressed leaves of the early summer are taking the ◈ shape of those of last years growth. What is this tree? You ought to have guessed it by this time. You say that the base of the leaves under side of on horizontal shoots of P. Alcoquiana are twisted.

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Are they as per Enclosed? I dont see it as if twisted a very little. You say "why do you say that 'of course' the Stomata of A. concolor are numerous above. They are almost always more on lower side" Are they? I dont see the twist at base. I call the rounded side of the leaf the lower & the white side showing the mid-rib the upper. Am I right? I expect on Sept 12th to start for Nevada. & hope to see you either going or coming. I expect to be about two weeks in the hills 50 miles South of Eureka. I should expect to find there P. monophylla. & your var Utahensis of the western Juniper. & perhaps A. subalpina. if I get high enough. What else can I hope for? I expect to make a short run to California. What can I do for you? Any suggestions or advice will be gratefully received by yr faithful. C.S.S.

Rec'd Nov 6th
Ans 8 ~~Nov~~ 8th

BOTANIC GARDEN,
HARVARD UNIVERSITY,
Cambridge, Mass. Nov 5 1878

My dear Dr Engelmann.

Here are some seedling Sciadopitys showing but two cotyledons. (all the seedlings are the same,) which I send (They are from the seed you thought would not germinate) thinking you may not have seen them. This seems an other reason for placing this plant near Sequoia. Parlatore does not seem to have noticed this character. nor did Murray Murray the only authors writers I remember who have said much about Sciadopitys. But you know of some one who has considered the leaves morphologically. as you told me once. I shall be obliged for the reference H. Mohl Bot Zeit., Jan 1838 Notice what I take to be

October. But that time the seeds had all dropped. Of this I feel quite sure although I did not take any specimens (but the wood) but I suppose this tree was probably until understood. Yours very truly,
C. S. Sargent.

How about the Pinus mitis seed

stomatae, this time on the under side.

I bring back from Nevada excellent specimens of Pinus aristata [illegible]. P. Edulis. P. flexilis. & Juniperus Californica var Utahensis. the only Conifers I found in Central Nevada. Any of these are very much at your service. The two latter are very common in. but I found only a few plants of P. aristata. on Prospect Mt. Eureka. growing on the north west side of the Mt. from 7.500 ft alt. up to the very summit 8.000 feet. This tree was once quite common on this Mt. but nearly all have been cut. the timber being the best Central Nevada supplies for props for the miners. This tree is known as the "Fox-tail Pine" in the neighborhood. but many persons in Eureka. speak of as an Spruce, which at a little distance it greatly resembles, owing to strictly pyramidal habit, & the fact that it holds its ~~fo~~ lower branches like the Spruces. The trees I saw were from 15 to 30 feet high, some times forking from the base, but generally with perfectly straight stems, the largest of which were 2 feet through 3 feet from the ground. My notes say "Bark reddish, in the young trees smooth, on the old, deeply furrowed & scaly — bark of the branches _white_ smooth & marked with the black scars of the fallen leaves — Cones sometimes in pairs, more often single" — The seeds had all dropped from the cones on the 21 of September. About Eureka there was no _P. flexilis_, but further South in the Monitor Range of Nevada it was common & several with fair timber. This is the tree which joins the same to the White Pine Range. White Pine district is in Nevada. The Juniper makes fair fuel but the Nut Pine is preferred & the latter is made chiefly into charcoal of which immense amounts are used in the mines coal being too expensive. Both P. aristata & monophylla are decidedly worth cultivating. The former has a sort of a tropical Araucaria sort of look & is certainly very distinct in appearance from any Pine I have ever seen. I could not find your Opuntia ~~Hesiona~~ pulchella & if you have it growing I should be much obliged for a little bit. Since I got home it has occurred to me that you put Pinus contorta among the Serotinae but I don't know why. I was among this tree in the Sierras for several days ~~start~~ during the first week of

Ry Nov 14
Ans 15

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. Nov 11 1878

Dear Dr Engelmann,

I am very sorry to learn from yours of the 8th that you are sick. I fear it must be serious if it has kept you in bed for two weeks! Pray be careful! I will see in the future that you get seedlings of all the Conifers we raise. I fear that now we have none of the genera you ask for young enough to be of any service. Strasburger is in the College Library. & Mr Watson has looked it through & noted on the enclosed his only references to the subject you refer to.

I don't understand about your awnless P. aristata. I send you one of my cones. which is awned. but ~~not as~~ the awns are not as long as in Colorado specimens: The awns in the young cones. and even in the yearling cones. are much more proportionately developed. It would appear that they do not grow proportionately with the cones. so that they must get knocked off from the mature cones. Since I did make a single specimen of Pinus contorta in the Sierras with two cones. one of them I send you. showing that it is not serotinous. The cone was open Sept 30th & I am clear that all had shed their seed at that date. as I was on the sharp look out for seed. This is a miserably named tree. as it is most rarely contorted. generally growing as a perfectly ~~symmetrical~~ symmetrical pyramid. with all the outline of a European Larch. hence the common name of Tamarack. I don't know why you call P. flexilis ~~common~~ rare in California. At 7.-8.000 ft alt. it is very common in the Sierras. where it is a much larger and finer tree than in Nevada.

Hoping to hear soon that you are entirely restored to your usual health.

Yrs. faithfully yours, C. S. Sargent.

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Rec. Nov 23
Ans — 26

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. Nov 20th 1878.

Dear Dr Engelmann,

I am very glad to learn from yours of 15th ~~[illegible]~~ Nov. that you are better. but don't get well too fast. and so exposing yourself get a relapse. I mail you the Sierra Nevada P. contorta. Take half of it to go with your cone. & send back the rest at your convenience. I send a bit of the wood of this specimen. showing the bark which is unexpectedly thin for a Pine. & very different from any I have ever seen. Can not P. Bolanderi be better referred to P. muricata than to P. contorta? We have Bolander's plant. which certainly looks more like what I suppose P. muricata may

ble, then like P. contorta. but we
have no specimen of P. muricata in herb.
& if you can spare one, pray send it.
It seems very improbable that an
alpine species like P. contorta should
grow at the elevation of the ocean.
Except perhaps at the far north.
If you had only said that you were
in doubt about any of these things.
(I wrote & asked what you wanted
me to look for) I could have brought
you car loads of specimens. but
the road ~~It~~ I travelled in California
was the same Gray & Hooker were
over last year. and where Bolander
Brewer & all California Botanists
have done most of their work.
In spite of all this there is not a
Herb Gray a specimen of P. contorta
from any part of the Sierra Nevada.

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Rec Dec 6

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. Dec 3d 1878.

Dear Dr Engelmann.

Here are the leaves of Pinus flexilis from Central Nevada. although I don't think there can be any doubt about the species.

I have not your Botany of Simpsons Expedition. Have you spare copies? If so I should like to own it.

Don't send back anything I have sent. but a part of the P. contorta specimen.

Faithfully.
C. S. Sargent -

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Rec Dec 9th
Ans same day

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. Dec 5th 1878

Dear Dr Engelmann,

I must say I don't understand your trouble with cones of P. contorta & P. aristata. The latter are always a third or more longer, and with thicker ends to the scales. As for the awn, it certainly exists in contorta, but not constantly if you consider the Colorado, N.W. coast & Sierra plants as one. I find in the Museum here a branch of contorta from Oregon by A. Dufur 1875, showing the cones of 4 years persisting, but not serotinous, and not at all awned. Lyall's Vancouver Island specimen is long awned. There is a

a specimen from Kellogg, without locality,
short leaved, small coned, and with
very short awns. Bigelow's (in Whipple
Exp.) specimen from California is awned,
as is Watson's Utah specimen of your
var. latifolia, which by the way seems
identical with my Sierra plant.
Mrs Ames
There is a specimen from Mrs Ames,
Plumas Co. with yearling cones, which
are very long awned, longer than
any I have ever seen in P. aristata.
None of these specimens show that
this plant is at all inclined
none
to be serotinous. none, but the
first, show that the cones persist.
The Colorado specimens are too
Conclusions
poor to draw any from.

Evidently if there is but a single species ~~specimen~~ here it is a very polymorphous. But as you remark, my wood and bark are identical with that of the Colorado tree, of which we have wood specimens from Brandegee.

If my plant is a hybrid, what are its parents? Certainly *aristata* is not one of them, for it grows nowhere in that neighborhood. I don't feel clear about *Bolanderi* = *contorta*, but you have the specimens before you. We have Bolanderi. *Bolanderi* but I cannot refer it to any of our forms of *contorta*. Don't ~~you~~ forget about the specimens of *muricata* please.

What do you say to the enclosed? It comes from Multnomah Co., Oregon, from Howell as *A. grandis*. Here we at

but the true grandis. or may it
be what Douglas meant by *amabilis*?
I thought at first of *nobilis*. but
the leaves seem very long. besides.
Nowells pretends to know *nobilis*
cones to collect & sell seed of it..
written
I have written for good specimens
& all information. but in the mean
guess
time tell me what you guess is.
I believe now that I have picked up all.
your botanical publications except. Simpson's
report of which I wrote the other day.
"Prodromus de Antholysi. which Trubner
Wislizenus. Mem.
is hopeless.. Plants of the Upper Missouri
Geyer
and Geyer's plants of Illinois & Missouri.
If you have copies of any of these to spare.
& will let me have them I shall be greatly
obliged — Many thanks for the seeds.
I found the plants you sent during my
absence all right on my return. Many
thanks. Yours truly. C. S. Sargent

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Rec'd Dec 21
Ans Jan 21

BOTANIC GARDEN,
HARVARD UNIVERSITY,
Cambridge, Mass. Dec 17 1878.

From Silliman's Journal. (no date)

Art XIII. Catalogue of a collection of plants made in Illinois and Missouri by Charles A. Geyer, with critical remarks by George Engelmann M.D. of St Louis.

So you deny the above, dear Dr. Engelmann. But here is a little seedling from Oregon of A. nobilis for you with the cotyledons still on. It is a little withered as it has been "laying round" for a two or three days while I have delayed writing. The seeds of A. menziesii from the same locality I shall have sown & will send you the young plants. Magnifica Howell does not seem to know, or at least he has not sent it yet. By all means

seem very close to each other. Faithfully. C. S. Sargent-send the old cones of the Colorado Contorta. The experiment with the seeds will be a most interesting one. If you pick off the cones from the branch before sending, each one should be dated, and I will have the seeds of each years cones planted separately and note the result. We have nothing but young plants of P. Banksiana & I have never seen it growing wild, but judging from the experience I once had in trying to get out the seeds from the cones of this species I am willing to believe that they remain closed until the crack of doom. I must confess that I cant make out from your letter whether my Prospect Mt Pine is P. aristata or P. Balfouriana. I have a good specimen of the bark if you want it, from the a tree growing near the one from which I took your cone & leaves. I wish you would tell me what

it is, what are the distinctive characters of these two Pines, which to me

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Rec Jan 31st
Ans March 4

BOTANIC GARDEN,
HARVARD UNIVERSITY,

Cambridge, Mass. Jan 28 1879

My dear Dr Engelmann,

Many thanks for your letter of the 26 inst. but you don't tell us what we want to hear even more than your information about Conifers, namely, how your son is getting on. I suppose, however, as you find time for a long letter that he is better. I have not written you on that subject, not for want of any

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sympathy for you, but because I knew, that, under such circumstances, the weight of letters however well intentioned are more a bore than a pleasure; because I knew you had your hands too full to read even what your friends wanted to say to you. When your box comes I will write to you in regard to the contents more in detail.

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I quite agree in your remarks
about Juniperus & their habitats.
Baker did not see plants
enough to allow him to judge
of their various habits. The
American species of the genus
seem to be now most satisfactorily
arranged; and thanks to your
paper, which was my constant
companion at the West, I
found no difficulty in making
out all the Juniper I came
across. The seedlings which
I sent you as *A. nobilis* came

from Oregon (not Nevada). I have sent to Woolson by Howells. They come from the same locality as the seedling grandis I sent you. I have already sent for specimens of all the Conifers of that neighborhood. If the two trees grow together it must be very easy to make mistakes in collecting the mixed seedlings.

Hoping that you are well & that your son is better.

Yours faithfully.

C. S. Sargent.

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Rec Febr 5th 1879
Ans March 4th

February 2d.

Dear Dr Engelmann,

Do you know that the young cones of Pinus Strobus are, at this season, not reflexed as they are at maturity but boldly upright? When do they make the change, or rather begin to make it, for I suppose it is a gradual one; and is there reason for their doing so, beyond the fact that the long stalks are not strong enough to support

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the heavy mature cones.

In looking yesterday at a White Pine. I took occasion to examine several trees of P. rigida. on none of which. could I find a single closed cone. All were open. & all seeds gone. This would show that the serotinous character in the species is by no means general. or constant. I should like to know when it sheds its seeds. in those cases where the cones open during the autumn. in which they come to maturity. Here both the Red & White Pines shed their seeds in September. & as soon as the cones mature. If the same species is sometimes serotinous & sometimes not as seems to be the case with *P. rigida*. & *P. contorta*. what is the reason for this anomalous behavior?. What does one pine gain over an other by guarding its seeds. for one or more years. or if there is an advantage to the tree in making its sowings of seed at different times & seasons. why do not all Pines have the same power.

~~Does~~ may not the serotinous character. come from some peculiarity of soil or climate? But I started to give you a hint about the N. P. Cones & Spruce I have written a long letter, which pray forgive.

Faithfully.

C. S. Sargent.

Dr. George Engelmann.
St Louis.

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Rec March 14

Ans ~~[illegible]~~ 29 April (23)

Botanic Garden of Harvard University,

[illegible] seedling

Cambridge, Mass. March 11 1879

My dear Dr Engelmann,

I return Lemmon's letter which rather confuses me than otherwise especially as to *Pinus ponderosa*. Perhaps with the specimens before you you can make head or tale of what he means. I mail you to day a young seedling of *Araucaria Bidwillii*, but unfortunately the cotyledons had dropped before I ~~sent~~ went to get it for you. The germination is the same as in *Encephalartos* of which I also send a better specimen. The *cotyledons* in the *Araucaria*. are developed under ground. and drop off while still enclosed in the hard seed. as is the case in all Palms and *Cycadaceae*. which I have seen germinate. But I have not noticed it in any other Conifer. nor the unequalable thickness of the radicle. the object of which in this case I dont understand.

The germinating Pine enclosed was sent to me for your *Pinus Edulis*.

I find it will be necessary for me to form a special Herbarium for the Arnold Arboretum, which as you know is situated 6 miles from that at Cambridge, much too far for reference. I propose to confine it (for many years at any rate) to trees & shrubs of 1 North America. 2d the whole temperate Zone. I shall keep it in my own house (at my house) for the present, or until proper accommodations at the Arboretum can be provided for it. Of Juniperus, Carya, Pinus &c &c &c you must have an immense accumulation and many useless duplicates. Some of these I hope you will consent to make over me. on some terms or other. If you could employ Eggert or some one else. to do the packing. I should be only too glad to pay for the work. I propose to employ Eggert & perhaps Letterman to make collections of your western trees & shrubs for me. and shall be glad of any suggestions you are willing to make. on this subject. I propose to myself. in addition to the herb. a dendrological museum. but the labor & the expense of such an undertaking rather appal me.

faithfully yours,

C. S. Sargent

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Rec April 9th
ans 23

Botanic Garden of Harvard University,

Cambridge, Mass. April 6th 1879

My dear Dr Engelmann.

Thanks for the grape seed. I believe we have plants of all those sent already growing: probably from seed that you have sent at different times. I am glad, however, to get this fresh supply, which I will have planted at once. I have also

the Contorta cones. If they contain
good seed these shall be carefully
planted and the results recorded.
It seems hard to believe that
your cones belong to the same
species, which I saw on the Sierra
Nevada. Yours are all unequally
gibbous at the base, as in the cones
of P. insignis. Now this I never noticed
in any of the Sierra Cones. but
you have my only 2 specimens. So.

you can decide this. The leaves, too, on the Colorado ones are much shorter ~~than and~~ stouter and more blunt than I remember to have ever seen them in California. I wish you could see those Sierra trees growing!

Palmer has turned up here at last with an immense quantity of seeds from Mexico. among them many *Opuntia* & other *Cactaceae*. Can you name them from the seeds? If they could

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be sowed the seed would be vastly more valuable for distribution among European gardens. Can I send you samples of it for this purpose?

Glad to hear your son is better! Hope you keep well also!

Faithfully,
C. S. Sargent.

Do you propose to keep Pseudotsuga as a genus?

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Rec May 2d,
Ans — 3'

Botanic Garden of Harvard University,

Cambridge, Mass. April 29 1879

My dear Dr Engelmann.

Many thanks for your Antholysis & the Simpson Report. both of which I am glad to get.

I fear there is no life in the Sagittaria corms. but I will plant them. Report results. I am most glad of the _A. Sitchensis_ seed. which I have been unable heretofore to get hold of - Where does this particular seed come from?. But the name! It seems too hard to leave Menzies out in the cold! The present generation at least, will always associate this tree with him; and this would seem to be one of the few cases where priority _might_

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be overlooked. I have had no time to even look at any of the specimens you send. Hope you will go to Europe! It will do you good.

As for the wood specimens. I shall be satisfied with what satisfies you. I should like Letterman Leggitts to make me a duplicate set. Of course these should show the bark and should always, if possible, be cut from the main stem rather than from a branch.

(over)

Faithfully yours, C.S.S.

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Hooker writes of a letter sent you by him, written by G. Syme, about Coniferae. Cant you

pass it along

send it along this way?

A.G.

Rec'd May 19th 1879 [illegible]

Botanic Garden of Harvard University,

Cambridge, Mass May 15th 1879.

My dear Dr Engelmann,

Many thanks for the chance you have given me to read this interesting correspondence - of which I have taken the liberty of retaining a copy. I think you have "got them" as the boys say. You are perfectly right; indefinite orders are very bad, & generally turn out most investigating. I should like Letterman or any one else to make for me a complete set (flowers & fruits) of herb. specimens of the ligneous plants of Mo. For such a set, if _dated_, with the localities given I am willing to pay the market price, which is from 8-10 cts per specimen. I don't care especially for wood sections just yet, as I don't want to undertake too much at once, but when you told me that Letterman was going to make a set for you. I thought that he could furnish a second set at very little additional cost, and that the saving between the two would make the work less expensive for us both. But I am not particular & so on this point won't now give any fixed order, but put this in your hands. - but the bark specimens I really want - Very many thanks for the Wheeler report -

I should like much to see your *P. arizonica*. but I suppose there are but few specimens.

Your sentence reads in such a way that it appears that the lower part of the cone of *P. ponderosa* remains on the ~~ground~~. branch. and that entire cones are never picked up.

Surely this must be an Error; and if I am not all out there are hundreds of millions of entire *ponderosa* cones laying all over the Sierras. Certainly those we brought home with us. picked from the ground are entire. *At last* I am to go to the Alleghanies. with Gray & Canby. in June. So we should have a good time of it. Any commissions in those parts? Faithfully. C. S. S.

ans Davenport Aug 12th

Botanic Garden of Harvard University,

Cambridge, Mass. August 7th 1879

My dear Dr Engelmann.

Here are two little seedlings raised from the seed of Picea Sitkensis you sent in the Spring.

I should have sent them before but I have been hoping that you would have ere this, turned up in these parts. That you are

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coming. & soon; & that you are not trying to work too hard in this abominably hot weather we are having!

Faithfully yours,

C. S. Sargent

Dr George Engelmann
St Louis.

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Rec Oct 15

ARBORETUM, HARVARD UNIVERSITY,
DIRECTOR'S OFFICE,

Brookline, Mass., October 10th 1879

My dear Dr Engelmann,

We got home a couple of days ago when to my great regret I found your note of adieux. as I had hoped you would have lingered with the summer till my return.

Since I have been gone I have worked assiduously, if not successfully among the oaks. On the Hudson I found only the single plant of Q. Muhlenbergii which I knew before. Quercus palustris is rarely found on the east bank (not on the west) - only two or three specimens seen. There is no Q. coccinea there. or about Rochester or up &

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down the valley of the Genesee.

If this species is southern, as I think, on the Atlantic seaboard & occurs in Minnesota without intermediate stations its distribution presents a problem I leave you to work at. I had while at Geneseo the opportunity to examine for the first time *Q. macrocarpa*. It grows there on the low rich bottom lands with *Q. bicolor*, and also equally well on the up land with *Q. alba*. The more common form there agrees well with Michaux's figure of *Q. olivaeformis*. both in the fruit and in the narrow deeply lobed leaves. I send you an acorn of the two forms. The bark is very unmistakable. and on the old trees easily distinguish this bark from all others. It is dark. and very deeply furrowed. or ridged - I took a specimen of one of these ridges. from an old fallen stem. It is three inches deep. and rather more wide. This same tree measured across the stump 7 feet 5 inches. and probably really more. for as the tree had broken near the stump when it fell it was difficult to measure accurately.

This will do away with the "middle region tree" of the Manual." If this peculiarity of bark is common to the species. it should of course be mentioned in the books. I saw a piece of the stem of the famous

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Wadsworth oak. which was destroyed many years ago by the caving in of the River bank. It was not a macrocarpa. the bark showed & I suppose it must have been a bicolor.* It when it girted 32 feet at the ground. & may have been the largest specimen of the species. In the immediate neighborhood of the spot where the tree grew are many other Swamp White oaks. girting from 15 to 20 feet. so that this species, too, must be set down as of the 1st class.

Quercus. Muhlenbergii which I certainly expected to find common here. I looked for in vain. Quercus Prinus which on the Hudson opposite Newburg. is one of the commonest forest

* As no Q. alba grows in the low grounds there.

Rec Oct 15 1879

ARBORETUM, HARVARD UNIVERSITY,

DIRECTOR'S OFFICE,

Brookline, Mass., Oct 6 1879

trees. grows sparingly in the valley of the Genesee. always on high, dry hill sides. and of very small size. It is evidently there on its northern limit. I only found one small plant fruiting.

I found a few trees of a very large fruited variety of Carya tomentosa growing in the low rich and overflowed bottom lands of the Genesee. I send you some of the nuts & a bud & can send foliage if you want it. The nut is not only unequaled for its size but for its excellent quality. and

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and the thinness of its shell. The trees are every where known & valued. and are called "King Nuts", and as such are sold in the market. I don't remember so fine a Hickory nut as this. and it should certainly be propagated.

I have sent to Hingham for a good section of Quercus coccinea. Will you have one?

I find that after all I have your Geyer's plants. so I shall proceed to have them bound up in good style. But this letter is already too long so goodbye for today. Faithfully yours,

C. S. Sargent.

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Rec Dec 3d
Ans same day

ARBORETUM, HARVARD UNIVERSITY,

DIRECTOR'S OFFICE,

Brookline, Mass., November 29' 1879

My dear Dr Engelmann.

Several of your letters are before me unanswered, but I have been very busy of late. The truth is that I have undertaken to prepare for the next Census Report a Volume on our Forests. in their various relations & Economic values. I went to Washington after I agreed to do it to arrange some of the details, and since my return I have been busy organizing the various and most difficult inquiries which have to be made in connection with this work. I am going to publish at once a Catalogue of our Trees with references to best descriptions and figures. geographical range. as I know it (and so how little I know about it in a general way!) economic value and uses. This catalogue I shall distribute widely with the request that recipients will furnish me with any information about the trees of their neighborhoods they happen to know about. I hope in this way to get a good deal of information about various points of which at present no one seems to know anything.

In this connection I am going to have the wood of all the trees tested for strength, heat giving qualities &c. In burning them the amount of ash. I intend on Lettermann.. I had expected to write

before this but I am waiting to hear
from Washington. If I cannot have
the specimens printed as 1st Class
mail matter. ~~Dr~~ Will write soon
on this subject. however. My best
advantage from this work is that it
allows me to travel at government expense.
where I like. So that I shall have a
splendid opportunity to see a good
deal of the Country. and make a good
many observations & do some collecting
I hope. Shall we go to Oregon together
next Summer? So it is Q. Prinus at
Rochester. I distinguish the two very
easily now — the bark is unmistakable.
You say nothing of my Rochester Carya —
that I thought unmistakable. Especially in
the thinness of the shell. Please look at
it. I wish you would write me as soon
as possible your idea of what the
range in Texas is of Q. Muhl. and

ARBORETUM, HARVARD UNIVERSITY,

DIRECTOR'S OFFICE,

Brookline, Mass., Nov 29 18[illegible]

the range of *Pinus serotina*. (we must make that a swamp var. of *rigida*. now that the serotinous char. does not hold. as in *P. contorta*.) *P. Elliottii* & *P. glabra*. also the north western range of *Picea alba*. What is an Evergreen oak. 20–30 feet high in the San Francisco Mts. which Bigelow talked about.?

Thinning! Wait a year or two & I will tell you something about it! now I know nothing on the subject. nor am I able to find any one who does.

The European Sumac you ask about in this connection is *R. Coriaria* of the

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of the Mediterranean Region.

By the way what do they tan with on the Pacific Coast? Do all Tsugas have the tanning quality of the Hemlock? How much there is to learn about our trees. to me at any rate!

Thanks for the information about P. missouriana: What I have been growing as P. densiflora. I have long suspected was nothing but P. austriaca. I will send you a bit tomorrow. You had better make up your mind to receiving in the future about 100 questions per week from yours very faithfully,

C. S. Sargent.

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Rec Dec 18'

ARBORETUM, HARVARD UNIVERSITY,

DIRECTOR'S OFFICE,

Brookline, Mass., Dec 15 1879.

My dear Dr Engelmann,

I am sorry to say that the postal card on which you gave me the names of two kinds of seeds you ~~had~~ sent. is lost. One is a Vitis & the other a Prunus. Will you kindly send me the names again if you remember them.

If you have still a copy of a list of plants of the upper Missouri by you. I should like to have it. No one seems to know anything about this or where it was published. There is one copy at Cambridge. There is also there two St Louis papers containing a lecture by you on the Conifers of the Rocky Mts. This you never sent me. and if you have still copies I should like to add them to my now almost complete set of your botanical papers.

Hope to hear from Letterman before long.

Faithfully,

C. S. Sargent.

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Nothing from Letterman yet.

ARBORETUM, HARVARD UNIVERSITY,
DIRECTOR'S OFFICE,

Rec Dec 22
Ans — 23

vol XII p 772

Brookline, Mass., Dec 18th 1879.

Dear Dr Engelmann,

Thanks for your letter & suggestion of the 15th. To begin with one of yours "?" I should like to know what in the world you are doing with ladders. at this season of the year; and why you are not more careful of yourself? If it had been in summer. I should guess that you were after an hybrid oak or Hickory. but these would not answer at this season. of the year. You have seen

I distributed seeds of C. Speciosa very generally last year to all European correspondents. & intend to send more this year.

by this time that I disclaim in the Gardeners Chronicle all credit for *Catalpa speciosa*. I have long ago written Bolle to the same effect. If you have material enough I wish you would publish the species: as you have had better opportunities to study it than any one else. I have just written it in my Catalogue as "ined." I am hard at work on the Catalogue and have got to Oaks nearly. So you need not fear but I shall soon begin to send you more questions than you will care

to answer. As soon as I can
get it all in the printer's hands,
I must go to Washington
for a few days. then I think
seriously of going to St Louis
to discuss several matters
with you, see Letterman &c. &
arrange with him & others for
next Summer's work. This
will be more satisfactory than
writing. From St Louis I am
prepared to go either to
San Antonio Texas. or over
the Iron Mt. & M & O. R Rs to
Mobile Florida. or to [illegible]

anywhere South. that you will go with me. provided I can be at home again by the middle of February. What do you say. will you go & see. Quercus Emoryii: or Torreya.? If I can possibly accomplish it I should like to be in St Louis before the 10 of January. but where one is dependent on a Washington printer it is useless to make plans.

I am putting Celtis integrifolia with C. Mississippiensis. & C crassifolia with C. occidentalis. with a special note calling attention to the importance of studying this genus in situ. In truth Ce

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N.° 2036.

Smithsonian Institution
Washington D.C.

For Sale,

A collection of the birds of California, made chiefly at San Francisco, and mounted on the spot from fresh speciments. It embraces about 170 species and 280 birds, all mounted except a very few, all in excellent condition and good attitudes, requiring only a little adjusting of the feathers to remedy the derangement of packing.

This collection is very complete in the rarer birds of California, especially in the larger raptores, and all the water birds. Many of these are scarcely represented or not at all in any other collection in the Country. The few deficiences consist chiefly in the commoner land birds of California, which can without defficulty be obtained. Among the more noteworthy birds are the Peregrine Falcon of the Farallones, the California Golden Eagle 39; Harris Buzzard (40); the Blue Backed Hawk (16); the Squirrel Hawk (32); the Chaparral Cock (68); Caſsin's Flycatcher (127); Maximilean Jay (431); Townsends surf bird (511); Bachmans Oystercatcher (513); the Wandering Tatler (541); the Black Rail (556); the Brown Tree Duck (575); the Rocky Mountain Garrot (594); the Black Stormy Petrel (643); the Western Plover, 509; Cassins Guillemot (724); and many others equally rare.

The following is a detailed list of the species, in a series of numbers referring to the Catalogue of North American Birds published by the Smithsonian Institution.

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